

Frequently Asked Questions about the Draft Enforcement/Compliance Data Standard

June, 2001

The questions and answers are arranged in five categories:

- General (questions 1-4)
- Implementation (questions 5-17)
- Use of Standard and Public Involvement (questions 18-19)
- Future Work (question 20)
- Technical Questions for Implementers (questions 21-27)

General Questions:

Q1: What is the Draft Enforcement/Compliance (E/C) Data Standard?

A: A “data standard” is a documented agreement among organizations that share or exchange data regarding representation, formats, and definitions for such data. The E/C Data Standard provides a common vocabulary to be used by EPA, States, Tribes and local government agencies that want to share data about environmental enforcement and compliance activities. The Data Standard is made up of a list of Data Elements, each of which is defined. Relationships or linkages between and among Data Elements (both in the E/C Data Standard and other Data Standards) are also identified.

Q2: Who developed the E/C Data Standard – is this another federal mandate?

A: No, this is not another federal mandate. The decision to develop Data Standards, including the E/C Data Standard, was made jointly by EPA and the States (through The Environmental Council of the States (ECOS), an organization that represents the heads of the state environmental agencies). All recognized that sharing and exchanging accurate environmental enforcement and compliance data is important and will remain so. All recognized that the public increasingly expects and deserves to have access to compilations of current data about environmental regulatory and enforcement activities. Together, they established the Environmental Data Standards Council (EDSC) to manage and guide the process. Action Teams were established to develop several different Data Standards, including the Enforcement/Compliance Data Standard. The Action Team that developed the E/C Data Standard was comprised of representatives from EPA, ECOS, several individual States, and an Indian Nation, and was co-chaired by an EPA and a State official.

Q3: Why do we need this “common vocabulary”?

A: There are many different environmental programs, and many different government agencies involved in environmental enforcement. Often, these different programs or different enforcement agencies use different names for activities or legal instruments that are functionally the same. In other instances, activities or instruments with the

same or similar names are functionally quite different.

For example, “administrative order,” “consent order,” “compliance order,” “compliance agreement,” “final order,” “Commissioner’s order” and “directive” are all names given to instruments that may have a very similar legal effect. On the other hand, “Notice of Violation” is a name for an instrument that can have varying legal effect in different programs or jurisdictions.

If we are to share and compare data from different programs and different agencies, it is important that we put data about similar things (activities or instruments) into the same boxes, and data about different activities or instruments into different boxes, regardless of what they are called or named by the source of the data. In other words, we need to make sure that apples are compared to apples, even if we know that some are “Golden Delicious” and some are “Granny Smith,” and even if in some places they are called “oranges.”

Q4: The E/C Data Standard looks pretty complicated -- does it have to be that way?

A: Yes -- enforcement is a complex business. The Action Team that developed the E/C Data Standard tried carefully to balance the sometimes competing demands of simplicity and accuracy and a reasonable level of completeness. Not infrequently, our concern for accuracy and completeness outweighed our desire for simplicity. We recognize that it will take some effort for the new user to become acquainted with the way in which the E/C Data Standard is organized, and the way in which data is captured through the Standard. Based on peer review we carried out towards the end of the development stage, we are confident that users who are knowledgeable about compliance and enforcement activities, as well as those who are familiar with data system design and management, will be successful in navigating through the E/C Data Standard. The Action Team has also developed several graphical depictions of the Data Standard, along with its embedded linkages and relationships; those new to the Standard should probably begin with these.

Implementation of the Data Standard:

Q5: Will my agency (or my program) be required to use the E/C Data Standard?

A: No State, Tribal or local government agency or program is required to adopt the terminology or conceptual approach embodied in the E/C Data Standard, with respect to that agency’s or program’s own data system. However, when EPA program systems adopt the Data Standard for exchanging or sharing data to with non-federal agencies, the E/C Data Standard will be the specified “road map” for such communications upon adoption and incorporation of the Standard by EPA.

Q6: When is the E/C Data Standard supposed to be approved by the States and EPA?

A: We expect the current work on development of the E/C Data Standard to be approved

by the EDSC by August, 2001. The EDSC will be providing a 45 day public review period with the expectation that the Action Team will review and respond to those comments.

Q7: Can some programs within a State, Tribe or local government follow the E/C Data Standard, while others do not?

A: Use of the E/C Data Standard will only be “required” when sharing or exchanging data to or through the EPA national data systems. Accordingly, State, Tribal or local government programs which are not required to provide data to the national data systems (e.g., non-federally authorized or delegated programs) are certainly not obliged to adopt or work with the E/C Data Standard.

Q8: I am in a State, Tribal or local government agency. My program doesn’t use the same data elements as are used in the E/C Data Standard. Is there an expectation that we will change our data elements?

A: No. The Data Standard uses terminology intended for data exchange, and is applicable only after the data you send crosses the threshold of your organization. Data that is exchanged will need to conform in definition, meaning and format to the Standard.

Q9: My EPA program doesn’t use the same terms as are used in the E/C Data Standard. Is there an expectation that we will change our own terminology?

A: The answer for EPA programs is somewhat more complex than for non-EPA agencies. Though the Data Standard uses Data Elements intended for data exchange, as with other data standards adopted by EPA, it is expected that EPA program systems will, as necessary, modify the data elements that they currently collect to conform with the Data Elements and terms in the E/C Data Standard. The schedule for these changes is normally three years, with waivers in consideration of modernization and update schedules possible. However, there will likely be some terms used in specific EPA programs that, while not used in the E/C Data Standard, are nevertheless appropriate for continued use by those programs.

Q10: Is the E/C Data Standard a new data system design? Will we have to change our existing data system to conform to it?

A: The answer for State, Tribal and local government agencies is No. The E/C Standard is more like a dictionary to help translate or exchange data from any one data system to any other. Use of the E/C Data Standard does not require that any non-EPA agency or program to change its current data system. Nor does it require that existing non-EPA data systems change their current nomenclature for enforcement or compliance activities and legal instruments. When data is exchanged from one system to another, the E/C Data Standard will provide the necessary information to insure that data from a given field in the sending system is “mapped” to the correct location in the receiving system. Local system designers may, once they choose to use this Data Standard for data exchange, elect to modify their system (perhaps in the context of a previously planned system modernization) in order to create the capability of exchanging data that conforms with the standard. As noted in the response to Question 9, above, EPA will

be using the Data Standard as its own data systems are modified and updated. In the immediate future, for example, EPA will be using this Data Standard to inform its development of its new Integrated Compliance Information System, ICIS.

Q11: We are planning to update our current enforcement/compliance data system. Can the E/C Data Standard help us in this effort?

A: Yes. If an environmental program or agency is planning to update its existing data system, the E/C Standard can provide a useful, peer-reviewed template for the kinds of data that current good practice suggests might be recorded or tracked for a high level or summary perspective. As stated above, in most cases the E/C Data Standard does not go into the detail required for local legal or program managers, but instead provides high level or summary data.

Q12: Are there any federal funds available to help States, Tribes, or local government agencies that implement federal programs if they choose to update their systems to enable them to communicate more easily using the E/C Data Standard?

A: Yes, although such funding is not linked directly to the E/C Standard development effort. EPA has and will continue to provide grant funding to assist other levels of government that implement federal environmental programs. Such assistance has often been used by grantees to help develop and update data management systems.

Q13: There are a number of Data Elements listed in the E/C Data Standard that we don't currently record or track in our own data system. Will we now be required to do so?

A: No. The presence of a given Data Element in the E/C Data Standard does not create a new data collection requirement. State, Tribal and local government systems do not need to begin collection of all data for which there are Data Elements in the Data Standard. EPA program systems need only update those elements that they currently collect to reflect the Data Elements in the Data Standard (see response to Question 9, above).

Q14: I currently provide a large amount of enforcement and compliance data to EPA from my State (or Tribal or local governmental) agency. What does the E/C Data Standard mean for that exchange?

A: In the short term, probably nothing. However, as States and EPA modernize their systems, and work towards improved and integrated data exchange tools (see "Network" Question, below) this Data Standard will be used as the basis for new data exchanges. State and EPA data flows are governed by a complex web of mandates, requirements, and agreements, which this Data Standard by itself will not change. Instead, this Data Standard is intended as a proactive effort to coordinate State and EPA system modernizations and data flows. As EPA implements this Data Standard it will influence the data EPA seeks from States, and the way in which that data is to be transmitted.

Q15: We have information in our own data system for which there are no Data Elements in the E/C Data Standard. What do we do?

A: It is almost certain that this will be the case. The E/C Data Standard was not meant to include an exhaustive listing of all possible enforcement and compliance data that any user might be interested in recording or tracking. Most users will have many more pieces of data in their own systems than can be depicted by the E/C Data Standard. Although it is relatively long and detailed, the E/C Data Standard is not (and cannot be) comprehensive. The Action Team that developed the E/C Data Standard has tried to select Data Elements sufficient to allow exchange of a enough data, and in sufficient detail, to provide most end users with the level of information they want and need.

Q16: What does this standard have to do with National Environmental Information Exchange Network I keep hearing about? And I thought everything was supposed to be in XML – is this XML?

A: The Network concept relies upon common “Data Exchange Templates” (DETs) expressed in “XML,” and exchanged based on common protocols. This Data Standard would be used as the starting point or “core” for Enforcement/Compliance DETs. Once established and approved, these flows would replace existing feeds to EPA’s national data systems. For example, several states have used a DET based on the State/EPA Facility Identification Standard to exchange facility data with EPA and other States, using Network protocols. The XML expression of this Data Standard is under development right now (June, 2001), and should be available by the end of the Summer. From that point forward, a new DET for Enforcement/Compliance would be based on this Data Standard.

Q17: If the Data Elements or “common vocabulary” in the E/C Data Standard doesn’t really fit my program, but I have to use it anyway when exchanging data, won’t that simply increase confusion, rather than reduce it?

A: We believe this is very unlikely. As noted earlier, the Action Team that developed the Standard included members from a variety of states and different EPA programs, thus providing to the process a widely varied experience and considerable depth of expertise. Then the draft Data Standard was peer reviewed – it was shared with other programmatic experts at both the Federal and State level, and substantial further revisions were made to address issues and concerns raised by those peer reviewers. Finally, the E/C Data Standard will now be distributed even more widely for another round of review and comment, and we are prepared to make further revisions if needed. Based on these efforts, we do not anticipate that the E/C Data Standard will “force” users to create inaccuracies or cause confusion by having to “shoehorn” data into the particular pigeonholes created in the Standard. On the contrary, we believe that for the overwhelming majority of compliance and enforcement activities carried out and legal instruments used throughout the country, at any level of government, there are appropriate and meaningful Data Elements within the E/C Data Standard through which information about those activities and instruments can be accurately shared.

Use of Data Standard:

Q18: Who will use the E/C Data Standard?

A: All Federal, State, Tribal and local government agencies involved in environmental compliance and enforcement activities are encouraged to use the E/C Data Standard when and if they share or exchange data with other agencies. They are also encouraged to refer to the E/C Data Standard, and use it as a tool, if they are planning to update or enhance their own existing data systems. The public will be the ultimate user of the Data Standard, because it will provide the common vocabulary that will help such end users better understand the meaning of the data they are looking at.

Q19: Will EPA be issuing rules for use of the E/C Data Standard?

A: No, at least not in the sense of issuing formal regulations. EPA does expect to provide guidance and/or a manual to assist States, Tribes or local governments carrying out federal programs, on how to use the Data Standard when providing required data to a national database.

Future Work:

Q20: Will the E/C Data Standard be open for revision in the future?

A: Yes. There is every reason to expect that adjustments or revisions will be necessary in the future. The need for revisions may arise in at least two areas: (1) Environmental programs evolve, and new programs may be added. This will necessitate, at a minimum, revisions and additions to the lists of Permissible Values associated with certain Data Elements. (2) Once in use, we may discover flaws in the Data Standard that need to be corrected (e.g., linkages and relationships that need to be adjusted; additional levels of detail that should be provided; etc.) EPA and ECOS expect to maintain an ongoing institutional mechanism to make needed revisions in the future.

Technical Questions for Implementers:

Q21: Do we need to use the Permissible Values (names or codes) from the Data Standard?

A: Permissible Values characterize the exact names, codes, and text that can be stored in a data field in an information system. If a standard Data Element has a fixed list of permissible values, the application Data Element should use the same list or a subset of the list to be in conformance with the standard. However, where the Standard has an unbounded list of sample permissible values, implementers may add permissible values as necessary.

Q22: Does the application data element need to have the same unit of measure as the Standard Data Element?

A: As unit of measure for a Standard Data Element indicates the unit by which the data value should be recorded, the application data element should use the same unit of measure (*e.g.*, meters, not feet).

Q23: Do we need to use the Standard Data Element names?

A: As application systems often have restrictive naming conventions, use of the Standard Data Element name is not required for conformance. It is really the data element meaning that determines conformance.

Q24: Do we need to use the Standard Data Element definitions in our documentation?

A: Data element definitions in an application should be similar in meaning but need not be identical in wording to the Data Standard. The essential meaning of the concept should be the same.

Q25: Does the application data element need to be the same data type as the Standard Data Element?

A: Standard data elements usually have data types of alphanumeric, numeric, integer, or real. Applications may use other data types based on the programming language in which they were written. The application data type should be the same as or equivalent to the standard data type to be conformant (*e.g.*, character may be considered equivalent to alphanumeric).

Q26: What if the Data Element field length in our application system is longer or shorter than the standard?

A: The application data element length should be the same or shorter than the Standard Data Element length. It is not conformant if it is longer than the Data Standard. If a program has a business need for a longer length, it can request that the size of the Data Standard field length be increased.

Q27: How do we know when the system conforms with the Data Standard?

A: In order to accurately determine whether an application system conforms with the Data Standard, a detailed review of the system metadata and documentation is needed to compare data element attributes to those in the standard.